opinion of the Officer in Charge, Marine Inspection, such equipment is in good and serviceable condition. All replacements shall be in accordance with Coast Guard requirements.

§ 70.30–5 Installations of equipment made during the unlimited national emergency declared by the President on May 27, 1941.

(a) Boilers, pressure vessels, machinery, piping, electrical, and other installations, including lifesaving, firefighting, and other safety equipment, installed on vessels during the Unlimited National Emergency declared by the President on May 27, 1941, and prior to the determination of title V of the Second War Powers Act, as extended (sec. 501, 56 Stat. 180, 50 U.S.C. App. 635), which do not fully meet the detailed requirements of the regulations in this chapter, may be continued in service if found to be satisfactory by the Commandant for the purpose intended.

Subpart 70.35—American Bureau of Shipping's Standards

§ 70.35–1 Standards to be used.

(a) Where in this subchapter an item, or method of construction, or testing is required to meet the standards established by the American Bureau of Shipping, the current standards in effect at the time of construction of the vessel, or otherwise as applicable, shall be used. The current standards of other recognized classification societies may also be accepted upon approval by the Commandant.

§ 70.35–5 Where obtainable.

(a) The standards established by the American Bureau of Shipping are usually published annually and may be purchased from the American Bureau of Shipping, Two World Trade Center, 106th Floor, New York, NY 10048. These standards may be also examined at the office of the Commandant (M), U.S. Coast Guard, Washington, DC 20593–0001, or at the office of any Coast Guard District Commander or Officer in Charge, Marine Inspection.

[CGFR 65–50, 30 FR 16890, Dec. 30, 1965, as amended by CGFR 68–32, 33 FR 5715, Apr. 12, 1968; CGD 88–070, 53 FR 34534, Sep. 7, 1988; CGD 88–070, 53 FR 37570, Sept. 27, 1988, 53 FR 44011, Nov. 1, 1988; CGD 95-072, 60 FR 50463, Sept. 29, 1995]

PART 71—INSPECTION AND CERTIFICATION

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71.25–25 Hull equipment.
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71.25–35 Marine engineering equipment.

AUTHORITY: 33 U.S.C. 1321(j); 46 U.S.C. 2113, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; 49 CFR 1.46.

SOURCE: CGFR 65–50, 30 FR 16895, Dec. 30, 1965, unless otherwise noted.

Subpart 71.01—Certificate of Inspection

§ 71.01–1 When required.

(a) Except as noted in this subpart or subpart 71.05, no vessel subject to inspection and certification shall be operated without a valid certificate of inspection.

§ 71.01–5 Posting.

The certificate of inspection shall be displayed under glass in a conspicuous place where observation by the passengers is likely.

[CGD 72–104R, 37 FR 14233, July 18, 1972]

§ 71.01–10 Period of validity.

(a) Certificates of inspection will be issued for a period of 1 year, except for those vessels subject only to the Act of May 10, 1956 (46 U.S.C. 390–390g), when

the certificates will be issued for a period of 3 years. Application may be made by the master, owner, or agent for inspection and issuance of a new certificate of inspection at any time within the period of validity of the current certificate.

(b) Certificates of inspection may be revoked or suspended by the Coast Guard where such process is authorized by law. This may occur if the vessel does not meet the requirements of law or regulations in this chapter or if there is a failure to maintain the safety requirements requisite to the issuance of a certificate of inspection.

[CGFR 68–82, 33 FR 18899, Dec. 18, 1968, as amended at CGD 95–012, 60 FR 48051, Sept. 18, 1995]

§ 71.01–15 Temporary certificate.

(a) If necessary to prevent delay of the vessel, a temporary certificate of inspection, Form CG-854, shall be issued pending the issuance and delivery of the regular certificate of inspection. Such temporary certificate shall be carried in the same manner as the regular certificate and shall in all ways be considered the same as the regular certificate of inspection which it represents.

§ 71.01–20 Expired certificate.

(a) Nothing in this subpart shall prevent a vessel upon a regularly established line from a port in the United States to a port of a foreign country not contiguous to the United States whose certificate of inspection expires at sea or while said vessel is in a foreign port or a port of Hawaii from lawfully completing her voyage without the valid certificate of inspection or temporary certificate required by this subpart: *Provided,* That the voyage shall be completed within 30 days after the expiration of the certificate of inspection. No such vessel shall depart if its certificate of inspection will expire within 15 days of the date of sailing.

Subpart 71.05—Permit To Proceed to Another Port for Repair

§ 71.05–1 When issued.

(a) The Officer in Charge, Marine Inspection, may issue a permit to proceed to another port for repair, Form CG–948, to a vessel, if in his judgment it can be done with safety, even if the certificate of inspection of the vessel has expired or is about to expire.

§ 71.05–5 To whom issued.

(a) Such permit will only be issued upon the written application of the master, owner, or agent of the vessel.

§ 71.05–10 Conditions of permit.

(a) The permit will state upon its face the conditions under which it is issued and whether or not the vessel is permitted to carry freight or passengers. Passengers may not be carried if the certificate of inspection has expired, except as provided under § 71.01–20.

§ 71.05–15 Posting.

(a) The permit shall be carried in a manner similar to that described in § 71.01–5 for a certificate of inspection.

Subpart 71.10—Permit To Engage in Excursions

§ 71.10–1 When issued.

(a) The Officer in Charge, Marine Inspection, may issue a permit to carry additional passengers on an excursion, Form CG-949, if after personally inspecting the vessel, it can, in his judgment, be done with safety.

§ 71.10–5 To whom issued.

(a) Such permit will only be issued upon the written application of the master, owner, or agent of the vessel.

§ 71.10–10 Conditions of permit.

(a) The permit will state upon its face the conditions under which it is issued, the number of extra passengers the vessel may carry, any additional lifesaving or safety equipment which will be required, the route for which the permit is granted, and the dates on which the permit will be valid.

§ 71.10–15 Posting.

(a) The permit when used, shall be carried in addition to the certificate of inspection and shall be carried in a manner similar to that described in § 71.01–5 for a certificate of inspection.

Subpart 71.15—Inspection of Vessels

§ 71.15–1 Standards in inspection of hulls, boilers, and machinery.

In the inspection of hulls, boilers, and machinery of vessels, the standards established by the American Bureau of Shipping, see part 70, subpart 70.35 of this chapter respecting material and inspection of hulls, boilers, and machinery, and the certificate of classification referring thereto, except where otherwise provided for by the rules and regulations in this subchapter, subchapter E (Load Lines), subchapter F (Marine Engineering), subchapter J (Electrical Engineering), and subchapter W (Lifesaving Appliances and Arrangements) of this chapter, shall be accepted as standard by the inspectors.

[CGD 84-069, 61 FR 25287, May 20, 1996]

Subpart 71.20—Initial Inspection

§ 71.20–1 Prerequisite of certificate of inspection.

(a) The initial inspection is a prerequisite of the issuance of the original certificate of inspection.

§ 71.20–5 When made.

(a) The original inspection will only be made upon the written application of the owner or builder of the vessel to the Officer in Charge, Marine Inspection, on Form CG-3752, application for inspection of U.S. vessel, at or nearest the port where the vessel is located.

§ 71.20–10 Plans.

(a) Before application for inspection is made and before construction is started, the owner or builder shall have plans indicating the proposed arrangement and construction of the vessel approved by the Commandant. The procedure for submitting plans and the list of plans to be supplied is set forth in subpart 71.65.

§ 71.20–15 Scope of inspections.

The initial inspection, which may consist of a series of inspections during the construction of a vessel, shall include a complete inspection of the structure, including the outside of the vessel's bottom, the machinery, unfired pressure vessels, equipment and the inside and outside of the boilers. The inspection shall be such as to insure that the arrangements, material, and scantlings of the structure, boilers and other pressure vessels and their appurtenances, piping, main and auxiliary machinery, electrical installations, lifesaving appliances, fire-detecting and extinguishing equipment, pilot boarding equipment, pollution prevention equipment and other equipment fully comply with the applicable regulations for such vessel and are in accordance with approved plans, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if any. The inspection shall be such as to ensure that the workmanship of all parts of the vessel and its equipment is in all respects satisfactory and that the vessel is provided with lights, means of making sound signals, and distress signals as required by applicable statutes and regulations.

[CGFR 68–32, 33 FR 5715, Apr. 12, 1968, as amended by CGD 82–036, 48 FR 654, Jan. 6, 1983; CGD 79–032, 49 FR 25455, June 21, 1984; CGD 95–012, 60 FR 48051, Sept. 18, 1995]

§ 71.20–20 Specific tests and inspections.

The applicable tests and inspections relating to annual inspection as set forth in subpart 71.25 shall be made at this time. In addition, the following specific tests and inspections shall be made by the inspector:

(a) For inspection procedures of lifesaving appliances and arrangements, see subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

(b) Installation of carbon dioxide extinguishing piping, see § 76.15–15 of this subchapter.

(c) For inspection procedures of marine engineering equipment and systems, see Subchapter F (Marine Engineering) of this chapter.

(d) For inspection procedures of electrical engineering equipment and systems, see subchapter J (Electrical Engineering) of this chapter.

(e) For inspection and testing standards of structural subdivision integrity, see § 72.01–25 of this subchapter.

(f) For inspection and testing of watertight doors, see §170.270 of this chapter.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 79–023, 48 FR 51007, Nov. 4, 1983; CGD 84-069, 61 FR 25287, May 20, 1996]

Subpart 71.25—Annual Inspection

§ 71.25–1 Prerequisite of reissuance of certificate of inspection.

(a) The annual inspection is a prerequisite of the reissuance of a certificate of inspection.

§ 71.25–5 When made.

(a) The annual inspection will be made only upon the written application of the master, owner, or agent of the vessel on Form CG–3752, Application for Inspection of U.S. Vessel, to the Officer in Charge, Marine Inspection, at or nearest the port where the vessel is to be inspected.

§ 71.25–10 Scope of inspections.

The annual inspection shall include an inspection of the structure, boilers, and other pressure vessels, machinery and equipment. The inspection shall be such as to insure that the vessel, as regards the structure, boilers and other pressure vessels, and their appurtenances, piping, main and auxiliary machinery, electrical installations, life-saving appliances, fire-detecting and extinguishing equipment, pilot boarding equipment, and other equipment is in satisfactory condition and fit for the service for which it is intended, and that it complies with the applicable regulations for such vessels, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if required. The lights, means of making sound signals, and distress signals carried by the vessel shall also be subject to the above-mentioned inspection for the purpose of ensuring that they comply with the requirements of the applicable statutes and regulations.

[CGFR 68–32, 33 FR 5715, Apr. 12, 1968 as amended by CGD 82–036, 48 FR 655, Jan. 6, 1983; CGD 79–032, 49 FR 25455, June 21, 1984; CGD 95–012, 60 FR 48051, Sept. 18, 1995]

§ 71.25–15 Lifesaving equipment.

For inspection procedures of lifesaving appliances and arrangements, see subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25287, May 20, 1996]

§ 71.25–20 Fire-detecting and extinguishing equipment.

(a) At each annual inspection, the inspector shall conduct the following tests and inspections of fire detecting and extinguishing equipment:

(1) All hand portable fire extinguishers and semiportable fire extinguishing systems shall be checked as noted in Table 71.25–20(a)(1). In addition, the hand portable fire extinguishers and semiportable fire extinguishing systems shall be examined for excessive corrosion and general condition.

TABLE 71.25–20(a)(1)

Type unit	Test
Soda acid	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Foam	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Pump tank (water or antifreeze).	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge with clean water or antifreeze.
Cartridge operated (water, antifreeze or loaded stream).	Examine pressure cartirdge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Remove liquid. Clean hose and inside of extinguisher thoroughly. Recharge with clean water, solution or antifreeze. Insert charged cartridge.
Carbon Dioxide	Weigh cylinders. Recharge if weight loss exceed 10 percent of weight of charge. Inspect hose and nozzle to be sure they are clear.[1]
Dry chemical (cartridge-operated type).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Inspect hose and nozzle to see they are clear. Insert charged cartridge. Be sure dry chemical is free-flowing (not caked) and chamber contains full charge.
Dry chemical (stored pressure type).	See that pressure gage is in operating range. If not, or if seal is broken, weigh or otherwise determine that full charge of dry chemical is in extinguisher. Recharge if pressure is low or if dry chemical is needed.

TABLE 71.25–20(a)(1)—Continued

Type unit	Test
Vaporizing liquid[2] (pump type).	Pump a few strokes into clean pail and replace liquid. Keep water out of extinguisher or liquid. Keep extinguisher completely full of liquid.
Vaporizing liquid (stored pressure type).	See that pressure gage is in operating range. Weigh or check liquid level to determine that full charge of liquid is in extinguisher. Recharge if pressure is low or if liquid is needed.

[1] Cylinders must be tested and marked, and all flexible connections and discharge hoses of semi-portable carbon dioxide and halon extinguishers must be tested or renewed, as required by §§ 147.60 and 147.65 of this chapter.

[2] Vaporizing-liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids shall be removed from all vessels. (See § 76.50–5(e) of this subchapter.)

(2) Fixed fire extinguishing systems shall be checked as noted in Table 71.25–20(a)(2). In addition all parts of the fixed fire extinguishing systems shall be examined for excessive corrosion and general conditions.

TABLE 71.25–20(a)(2)

Type system	Test
Foam	Systems utilizing a soda solution shall have such solution replaced. In all cases, ascertain that powder is not caked.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of charge.[1]

[1] Cylinders must be tested and marked, and all flexible connections on fixed carbon dioxide systems must be tested or renewed, as required by §§ 147.60 and 147.65 of this chapter.

(3) All fire detecting and extinguishing systems, all piping controls, valves, and alarms shall be checked to ascertain that the system is in operating condition. In this respect, automatic sprinkling systems shall be checked by means of test stations or opening heads, smoke detecting systems shall be checked by introducing smoke into the accumulators, fire detecting and manual alarm systems shall be checked by test stations or actuating detectors or pull boxes, and steam smothering lines shall be checked with at least a 50 p.s.i. air pressure with the ends capped or by blowing steam through the lines at the designed pressure.

(4) The fire main system shall be operated and the pressure checked at the most remote and highest outlets. All fire hose shall be subjected to a test pressure equivalent to the maximum pressure to which they may be subjected in service, but not less than 100 p.s.i.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGFR 68–32, 33 FR 5716, Apr. 12, 1968; CGD 84–044, 53 FR 7748, Mar. 10, 1988]

§ 71.25–25 Hull equipment.

(a) At each annual inspection, the inspector shall conduct the following tests and inspections of hull equipment:

(1) All subdivision bulkheads shall be examined to determine that their watertight integrity has not been impaired.

(2) All watertight doors shall be operated locally by manual power and also by hydraulic or electric power if so fitted. Where remote control is fitted, the doors shall also be operated by the remote control apparatus.

(3) All magnetically controlled fire doors shall be operated locally and by the remote control, and all automatic fire dampers shall be checked to determine that they are in an operable condition.

(4) The remote controls of all valves shall be operated.

(5) An inspection of the cargo gear shall be required. The inspection may consist of tests and examinations to determine the condition and suitability of the cargo gear. Current valid certificates and registers of cargo gear issued by nonprofit organizations or associations approved by the Commandant, may be accepted as prima facie evidence of the condition and suitability of the cargo gear. Cargo gear certificates and registers will not be issued by the Coast Guard.

(b) Every acceptable cargo gear certificate and/or register shall be properly executed by a person authorized to do so and shall:

(1) Certify as to the tests and examinations conducted;

(2) Show the dates on which the tests and examinations were conducted; and,

(3) Indicate that the cargo gear therein described complies with standards equal to or exceeding those set forth in subpart 71.47.

(c) Competent persons for the purposes of this section and subpart 71.47 are:

(1) Coast Guard marine inspectors;

(2) Surveyors of the organizations or associations approved by the Commandant;

(3) Such other persons as are authorized by the regulations in subpart 71.47 as may be required; and,

(4) Responsible officials or employees of the testing laboratories, companies, or organizations who conduct tests of pieces of loose cargo gear, wire rope, or the annealing of gear as may be required.

(d) The registers issued in connection with cargo gear certification must have all required entries fully completed as of the dates indicated, shall be kept current, and shall include the following:

(1) A register of the cargo handling machinery and the gear accessory thereto carried on the vessel named therein;

(2) Certification of the testing and examination of winches, derricks, and their accessory gear;

(3) Certification of the testing and examination of cranes, hoists, and their accessory gear;

(4) Certification of the testing and examination of chains, rings, hooks, shackles, swivels, and blocks;

(5) Certification of the testing and examination of wire rope;

(6) Certification of the heat treatment of chains, rings, hooks, shackles, and swivels which require such treatment; and,

(7) Certification of the annual thorough examinations of gear not required to be periodically heat treated.

(e) It is the responsibility of the master to have a ship's officer inspect cargo gear when required by subpart 71.47. For those inspected vessels which do not have valid cargo gear certificates and registers as provided by this section, such vessels will be required to have their shipboard cargo gear undergo tests and examinations in accordance with the provisions of Subpart 71.47.

§ 71.25–30 [Reserved]

§ 71.25–35 Marine engineering equipment.

(a) For inspection procedures of marine engineering equipment and systems, see subchapter F. (Marine Engineering) of this chapter.

§ 71.25–37 Pollution prevention.

At each inspection for certification, the inspector shall examine the vessel to determine that it meets the vessel design and equipment requirements for pollution prevention in 33 CFR part 155, subpart B.

[CGD 71–161R, 37 FR 28262, Dec. 21, 1972]

§ 71.25–40 Sanitary inspection.

(a) At each annual inspection the passenger and crew quarters, toilet and washing spaces, galleys, serving pantries, lockers, etc., shall be examined by the inspector to be assured that they are in a sanitary condition.

§ 71.25–45 Fire hazards.

(a) At each annual inspection, the inspector shall examine the tank tons and bilges in the machinery spaces to see that there is no accumulation of oil which might create a fire hazard.

§ 71.25–50 Inspector not limited.

(a) Nothing in this subpart shall be construed as limiting the inspector from making such tests or inspections as he deems necessary to be assured of the safety and seaworthiness of the vessel.

Subpart 71.30—Reinspection

§ 71.30–1 When made.

(a) In general, at least three reinspections shall be made on each vessel within one year. These reinspections will be made at approximately equal intervals between annual inspections. In the case of vessels with a seasonal schedule, reinspections will be made during the operating season if practicable.

(b) For those vessels subject only to the act of May 10, 1956 (46 U.S.C. 390–390g), reinspections will be made annually between inspections for certification.

§ 71.30–5 Scope.

(a) The inspector shall examine all accessible parts of the vessel's hull, machinery, and equipment to be assured that it is in a satisfactory condition.

(b) In general, the scope of the reinspection shall be the same as for the

annual inspection, but will be in less detail unless it is determined that major change has occurred since the last annual inspection.

§ 71.30–10 Inspector not limited.

(a) Nothing in this subpart shall be construed as limiting the inspector from making such tests or inspections as he deems necessary to be assured of the safety and seaworthiness of the vessel.

Subpart 71.40—Inspection After Accident

§ 71.40–1 General or partial survey.

(a) A survey, either general or partial, according to the circumstances, shall be made every time an accident occurs or a defect is discovered which affects the safety of the vessel or the efficacy or completeness of its lifesaving appliances, fire-fighting or other equipment, or whenever any important repairs or renewals are made. The survey shall be such as to insure that the necessary repairs or renewals have been effectively made, that the material and the workmanship of such repairs or renewals are in all respects satisfactory, and that the vessel complies in all respects with the regulations in this subchapter.

Subpart 71.45—Sanitary Inspections

§ 71.45–1 When made.

(a) An inspection of passenger and crew quarters, toilet and washing spaces, serving pantries, galleys, etc., shall be made, in general, at least once in every month. If the route of the vessel is such that it is away from a United States port for more than one month, an inspection shall be conducted at least once every trip.

Subpart 71.47—Inspection of Cargo Gear

§ 71.47–1 When made.

(a) The specific tests and examinations shall be made at the intervals stated in the regulations in this subpart.

(b) A thorough examination of the assembled gear shall be made at least once in every year.

(c) An inspection to determine the condition and suitability of shipboard cargo gear will be made by a marine inspector at each inspection for certification. Inspections may be made at such other times as considered necessary by the Officer in Charge, Marine Inspection.

(d) For vessels fitted with cargo gear, an initial test of the assembled units under proof loads shall be conducted, followed by a complete dismantling or disassembling of such gear and a thorough examination of the parts to ascertain its condition. Subsequent tests of the assembled units under proof loads, followed by a dismantling or disassembling of such gear and a thorough examination shall be made once every five years, or oftener if necessary.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 87–089, 55 FR 21550, May 25, 1990]

§ 71.47–3 Definitions of terms and words used in this subpart.

(a) *Cargo gear.* The term ''cargo gear'' includes masts, stays, booms, winches, cranes, elevators, conveyors, standing and running gear forming that part of the shipboard cargo gear used in connection with the loading or unloading of a vessel. This term does not include material handling gear and rigging of special design vessels used solely in dredging, pile driving, drilling for mineral deposits, and construction work.

(b) *Dismantling or disassembling of gear.* The ''dismantling'' or ''disassembling'' of gear contemplated is the taking apart of units of gear to the extent necessary to determine the suitability of such gear for continued service and as may be specifically required to carry out the intent of a particular regulation in this subpart. After proof load tests the disassembling need not include the sheaves and pins of the blocks included in the test unless there appears to be evidence of deformation or failure.

(c) *Thorough examination.* The ''thorough examination'' contemplated is a visual examination, supplemented if necessary by other means such as by a

hammer test or by a test with electronic or ultrasonic devices.

(d) *Ton.* The word ''ton'' means a ton of 2,240 pounds.

(e) *Safe working load.* The ''safe working load'' (SWL) contemplated is the load the gear is approved to lift, excluding the weight of the gear itself.

§ 71.47–5 Tests and examinations of shipboard cargo gear.

(a) For vessels fitted with cargo gear and without valid cargo gear certificates and registers issued by organizations or associations, recognized by the Coast Guard, inspections shall be made by those competent persons described in § 71.25–25(c)(1) and (2), to determine the condition and suitability of the shipboard cargo gear. For the initial and subsequent fifth year inspections, all the cranes, winches, hoists, derrick booms, derrick and mast bands, and all parts using in loading or unloading cargo shall be assembled in units and such assembled units shall then be tested under proof loads. The proof loads shall be handled for various types of units as required by specific regulations in this subpart. After the proof load tests of the assembled units of gear have been made, such gear shall be disassembled or dismantled so as to permit them to be thoroughly examined. The sheaves and pins of the blocks included in these proof load tests need not be removed unless there appears to be evidence of deformation or failure.

(b) For vessels fitted with cargo gear and holding valid cargo gear certificates and registers issued by organizations or associations recognized by the Coast Guard, the marine inspectors may accept such certificates as prima facie evidence of compliance with the requirements in this subpart. If an Officer in Charge, Marine Inspection, is in doubt as to the condition and suitability of shipboard cargo gear for such a vessel, the tests and examinations, or such portions thereof as deemed necessary, provided for in this subpart will be required.

(c) If any part or portion of the gear fails or becomes defective during such tests, such defective equipment shall be satisfactorily repaired or replaced.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 87–089, 55 FR 21550, Aug. 8, 1990]

§ 71.47–10 Cargo gear of special design and limited use.

(a) The regulations in this subpart shall apply to cargo gear of special design and limited use (derrick barges rigged for heavy lifts, cargo booms on self unloaders, etc.) only to the extent that it is practicable to do so. These requirements may be modified by the Officer in Charge, Marine Inspection, where the inspection is performed, according to the design characteristics of such cargo gear.

(b) Nondestructive tests, such as radiography, ultrasonic, electronic or other methods, may be utilized to determine the condition of heavy lift gear after it has been unit tested, provided such methods are acceptable to the Officer in Charge, Marine Inspection, having cognizance of the tests. However, no deviations or modifications shall be permitted to lessen the requirements for cargo gear inspection as set forth in § 71.47–70 and the maintenance of the applicable cargo gear records as set forth in § 71.47–75.

§ 71.47–15 Cargo gear plans required when plans are not approved by a classification society or recognized cargo gear organization.

(a) For a new vessel or a vessel applying for initial inspection, the following plans of cargo gear shall be submitted in triplicate to the Officer in Charge, Marine Inspection, having jurisdiction for approval:

(1) Plans showing a stress diagram with the principal details of the gear.

(2) Plans containing a diagram showing the arrangement of the assembled gear and indicating the safe working load for each component part.

(b) The safe working load on which the design of any component part of the cargo gear is to be based, shall be taken as the maximum resultant load upon the component part in the design conditions assumed. The safe working load of the assembly is the load the gear is approved to lift, excluding the weight of the gear itself.

(c) One approved copy of each set of cargo gear plans shall be retained on the vessel.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGFR 68–105, 33 FR 14703, Oct. 2, 1968]

§ 71.47–20 Cargo gear plans approved by a classification society.

(a) The plans required by § 71.47–15 (a) need not be submitted to the Officer in Charge, Marine Inspection, for approval if such plans are or have been approved by the American Bureau of Shipping or similar classification society recognized by the Commandant.

(b) One approved copy of each set of cargo gear plans shall be retained on the vessel.

§ 71.47–23 Cargo gear plans approved by a recognized cargo gear organization.

(a) The plans required by § 71.47–15(a) need not be submitted to the Officer in Charge, Marine Inspection, for approval if such plans are or have been approved by a recognized cargo gear organization listed in paragraph (b) of this section.

(b) The following cargo gear organizations are recognized as having the technical competence to handle the required review of cargo gear plans, including stress and arrangement diagrams, and this recognition will continue in effect until suspended, canceled, or modified by proper authority:

(1) International Cargo Gear Bureau, Inc., with home office at 17 Battery Place, New York, N.Y. 10004.

(c) One approved copy of each set of cargo gear plans shall be retained on the vessel.

[CGFR 68–105, 33 FR 14703, Oct. 2, 1968, as amended by CGFR 69–116, 35 FR 6860, Apr. 30, 1970]

§ 71.47–25 Factors of safety.

(a) Except as provided in paragraph (b) of this section, in the design of cargo gear, the minimal safety factors in Table 71.47–25(a) must be used to meet the requirements of § 71.47–15.

TABLE 71–47.25(a)

Safe working loads for component parts	Safety factors based on [1]		
	Ultimate strength	Yield point	Breaking test load
All metal structural parts except steel booms, stayed masts, pins, and connections:			
5 tons or less working load of the assembled gear	5.00	[1] 2.75	.....
15 tons working load of the assembled gear	4.00	[1] 2.20	.....
60 tons or more working load of the assembled gear	3.75	[1] 2.05	.....
Steel booms:			
10 tons or less working load of the assembled gear	.....	3.00	.....
13 tons or more working load of the assembled gear	.....	2.50	.....
Stayed masts:			
10 tons or less working load of assembled gear	5.00	.....	.....
13 tons or more working load of assembled gear	4.00	.....	.....
Pins and connections:			
10 tons or less working load of assembled gear	.....	[1] 3.00	.....
13 tons or more working load of assembled gear	.....	[1] 2.50	.....
Wire rope:			
10 tons or less working load	.....	.....	5.00
13 tons or more working load	.....	.....	4.00
Fiber rope:			
For running rigging	7.00	.....	.....
For fixed gear and vangs	5.00	.....	.....
Wooden structural parts	8.00	.....	.....
Chains	4.50	.....	.....

[1] Intermediate values of safety factors may be used.
[2] The minimum yield point for design purposes shall not be considered greater than 72 percent of the minimum ultimate strength of the steel.

(b) The Commandant may permit the use of safety factors different than those in Table 71.47–25(a) in the design of cargo gear that he considers special.

[CGD 72–150R, 37 FR 20826, Oct. 4, 1972]

§ 71.47–30 Loose gear certificates and tests.

(a)(1) Evidence of compliance with the proof load test requirements in this section for all chains, rings, hooks, links, shackles, swivels, blocks, and any other loose gear whether accessory to a machine or not, but which is used as ship's cargo gear, shall be listed on an appropriate certificate.

(2) This evidence of test and the recording thereof is required only once with respect to each article of gear so long as each article is identified and the certificates required are available on the vessel.

(3) Proof loads applied to the articles of loose gear shall be as shown in Table 71.47–30(a)(3).

TABLE 71.47–30(a)(3)

Article of gear	*Proof load*
Chains, rings, hooks, links, shackles, swivels.	Twice the safe working load.
Single sheave block	Four times the safe working load.[1]
Multiple sheave block with safe working load up to and including 20 tons[1].	Twice the safe working load.
Multiple sheave block with safe working load over 20 tons up to and including 40 tons.	20 tons in excess of the safe working load.
Multiple sheave block over 40 tons	One and a half times the safe working load.
Roller chains (pitched chains) used with hand operated chain falls, and rings, hooks, shackles, or swivels permanently attached thereto.	Do.
Chain fall blocks used with roller chains (pitched chains), and rings, hooks, shackles, or swivels permanently attached thereto.	Do.

[1] The proof load applied to the block is equivalent to twice the maximum resultant load on the eye or pin when lifting the safe working load attached to a rope which passes around the sheave of the block. The proof load is, therefore, equal to four times the safe working load or twice the safe working load when the load is attached directly to the block instead of a rope passing around the sheave.

(b) All chains, rings, hooks, links, shackles, swivels, blocks, and any other loose gear whether accessory to a machine or not, but which is used or intended for use as ship's cargo gear, shall bear a mark or number by which each piece can be identified and shall be listed on a loose gear certificate. The safe working load ''SWL'' shall be marked on all blocks.

(c) The loose gear certificate shall show the distinguishing number or mark applied to the article of gear; a description of the article of gear; the date when the test proof load was applied; and the safe working load. The forms for loose gear certificates shall be as prescribed by and acceptable to associations or organizations approved by the Commandant and shall be suitable for the purposes of this section.

(d) After being tested all of the gear shall be examined to ascertain whether any part has been damaged, permanently deformed by the test or has other visible defects. The pins and sheaves of all tested blocks shall be removed for this purpose. If damaged during these tests, such gear shall be satisfactorily repaired or replaced.

(e) The required examinations as set forth in paragraph (d) of this section may be accomplished by mechanical, electrical, or other means provided the method employed is equal in efficiency to the visual examination of disassembled gear.

§ 71.47–35 Test and certification of wire rope.

(a) All wire rope used as shipboard cargo gear shall be able to withstand a breaking test load of at least five times the safe working load. In the case of gear with a lifting capacity of over 10 tons, the breaking test load of wire rope shall be at least four times the safe working load. All wire rope shall be identified and described in a wire rope certificate. Such certificate shall be furnished and attested to by the manufacturer or a testing agency and shall certify:

(1) The breaking test load of a sample of the wire rope, which should be at least five times the safe working load or at least four times the safe working load if part of gear with a lifting capacity of over 10 tons;

(2) The name and address of the manufacturer;

(3) The diameter of the rope in inches and/or fractions thereof;

(4) The number of strands and the number of wires in each strand;

(5) The quality of the wire (e.g. improved plow steel);

(6) The date of the test; and,

(7) The load at which the sample broke.

(b) The forms for the wire rope certificates shall be as prescribed by and acceptable to associations or organizations approved by the Commandant and shall be suitable for the purposes described in this section.

(c) In addition to the manufacturers' or testing agencies' attestations, a sample of the wire rope may be tested to destruction if required by the marine inspector when a visual inspection indicates an apparent defective condition.

§ 71.47–40 Proof test of cargo gear as a unit.

(a) Winches with their accessory gear, including the derricks and attachments, at least once in each five

years, shall be tested as a unit with proof loads exceeding the safe working load as set forth in Table 71.47–40(a).

TABLE 71.47–40(a)

Safe working load of assembled gear	*Proof load*
Not exceeding 20 tons	25 percent in excess.
Over 20 tons but not exceeding 50 tons.	5 tons in excess.
Over 50 tons	10 percent in excess.

(b) The proof load applied to winches and their gear shall be lifted with the ship's normal tackle, including the winches, and with the boom at an angle which should not be greater than 15 degrees to the horizontal or to the lowest angle approved in association with the design, or when these angles are impracticable to the lowest practicable angle. When the load has been lifted, it shall be swung as far as possible in both directions.

(1) Where electrical winches are fitted with electromagnetic brakes, or where electrohydraulic winches are fitted with electromagnetic or hydraulic brakes at the winch, mechanical brakes for manual operations will not be required, but if so fitted shall be in satisfactory operating condition.

(2) Current for electric winch operation during the test shall be taken from the ship's circuits. Shore current may be used if it passes through the ship's switchboard.

(c) Cranes and other hoisting machines with their accessory gear, at least once in each five years, shall be tested with a proof load which shall exceed the safe working load as set forth in Table 71.47–40(a).

(d) The proof load applied to cranes and hoists shall be lifted, topped and swung (slewed) as far as possible in each direction. If the boom of the crane has a movable radius, it shall be tested with a proof load as set forth in this section at the maximum and minimum radii of the boom. In the case of hydraulic cranes whose capacity is limited by pressure, and with which it is not possible to lift a load 25 percent in excess of the safe working load, the greatest possible load in excess of the safe working load, shall be used. These tests and the amounts of the loads shall be recorded.

(e) After satisfactory completion of the proof load testing of the cargo gear in accordance with paragraphs (a), (b), (c), and (d) of this section, the cargo gear and all component parts shall be given a thorough visual examination, supplemented as necessary by other means such as a hammer test or with electronic or ultrasonic devices, to determine if any of the parts were damaged, deformed, or otherwise rendered unsafe for further use. If found defective, such gear shall be replaced.

(1) When the test is being conducted for the first time on a vessel, accessory gear shall be dismantled or disassembled for examination after the test. The sheaves and pins of the blocks included in this test need not be removed unless there appears to be evidence of deformation or failure.

(2) For subsequent tests such parts of the machinery and gear shall be dismantled and/or disassembled after the test as necessary to determine its suitability for continued service.

(f) Appropriate means shall be provided to prevent the foot of the boom from being accidentally lifted from the socket during the test.

(g) Vessels whose cargo gear has been in use but are without the valid registers and certificates described in §71.25–25 will be inspected for defective cargo gear. The gear shall then be tested and examined as prescribed in this section. If the movable weights for proof testing are not reasonably available, a spring or hydraulic scale certified for accuracy may be used. Whenever such scales are used, the proof load shall be applied with the boom swung out as far as possible in one direction and then in the other direction, and at such intermediate positions as may be indicated. At any position, the indicator of the scale must maintain a constant reading under the proof load for a period of five minutes.

(h) On all types of winches and cranes efficient means shall be provided to stop and hold the proof load in any position, and the efficiency of such means shall be demonstrated.

(1) Electric winches, electrohydraulic winches fitted with electromagnetic or hydraulic brakes at the winch, or cranes shall be equipped so that a failure of the electric power shall stop the

motion and set the brakes without any action on the part of the operator.

(2) Current for electric winch and crane operations during the tests shall be taken from the ship's circuits. Shore current may be used if it passes through the ship's switchboard.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 87–089, 55 FR 21550, May 25, 1990]

§ 71.47–45 Marking of booms and cranes.

(a) The safe working load (abbreviated ''SWL'') for the assembled gear shall be marked on the heel of each boom with the minimum angle to the horizontal for which the gear is designed. These letters and figures shall be in contrasting colors to the background and at least one inch in height.

(b) Where booms are rated at varying capacities depending on the radii, tables indicating the maximum safe working loads for the various working angles of the boom and the maximum and minimum radii at which the boom may be safely used shall be conspicuously posted near the controls and visible to the operator when working the gear.

§ 71.47–50 Use of wire rope and chains.

(a) An eye splice made in any wire rope used as cargo gear, with or without a thimble, shall have at least three tucks with whole strands and two tucks with one half of the wire cut from the tucking strand: *Provided*, That this requirement shall not preclude the use of any other form of splice or connection if it is as efficient as the splice specified.

(b) Single wire rope cargo falls, wire rope pendants, topping lifts and preventers shall consist of clear lengths without splices except at the working ends. Wire rope clips shall not be used to form eyes in the working ends of single wire rope cargo falls.

(c) Wire rope shall not be used for shipboard cargo gear if in any length of 8 diameters, the number of broken wires exceeds ten percent of the total number of wires in the rope, or if the rope shows other signs of excessive wear, corrosion, kinking or defect.

(d) Hoisting or sling chains used for shipboard cargo gear shall not be used if a length of chain has been stretched more than five percent of the original length, or the chain has become unsafe through overloading or faulty heat treatment, or whenever other external defects are evident.

(e) Chains used for shipboard cargo gear shall not be shortened by knotting, bolting, or wiring the links. The use of chains having a knot or kink as shipboard cargo gear is prohibited.

§ 71.47–55 Annealing.

(a) Chains, hooks, rings, links, shackles, and swivels of wrought iron used as cargo gear shall be annealed at the following intervals:

(1) Wrought iron chains and gear in general use and of one half inch or less, once at least in every six months.

(2) All other wrought iron chains and gear, including topping lift chains, in general use, at least once in every twelve months.

(b) The annealing shall be done in a suitable closed oven and not over an open fire. Wrought iron shall be annealed at a temperature of between 1100° and 1200° Fahrenheit for a period of between 30 and 60 minutes. After being annealed, the article shall be allowed to cool slowly and shall be then tested completely for defects.

(c) Heat treatment of the cargo gear shall be done only by reputable firms having suitable equipment and personnel trained for this purpose. A certificate attesting to the annealing of all gear heat treated shall be furnished to the vessel.

(d) The heat treatment of chains, hooks, rings, links, shackles, and swivels of materials other than wrought iron used as cargo gear, if required, shall be effected in accordance with the manufacturer's instructions.

§ 71.47–60 Additions to gear.

(a) When articles of loose gear and/or wire rope conforming with the requirements in this subpart are added to installed gear, or used as replacements in such gear from time to time, a record shall be maintained on the vessel which shall identify each article and the certificate accompanying it.

§ 71.47–65 Alterations, renewals, or repairs of cargo gear.

(a) Whenever important repairs, renewals, or alterations are indicated or intended for the masts, booms, and permanent fittings of the cargo gear, such repairs, renewals, or alterations shall be undertaken only after compliance with the applicable provisions of § 71.55–1.

(b) Tests and examinations of the repairs, renewals, or alterations will be in accordance with the provisions of § 71.47–40.

(c) When welding is used to lengthen, alter, or repair chains, rings, hooks, links, shackles, or swivels, they shall be properly heat treated and shall before being again put into use, be tested and examined in accordance with the provisions of § 71.47–30.

§ 71.47–70 Responsibility of ship's officer for inspection of cargo gear.

(a) All wire rope, chains other than bridle chains attached to booms or masts, and all rings, hooks, links, shackles, swivels and blocks used in loading or unloading shall be visually inspected by a ship's officer designated for that purpose by the master.

(b) These inspections by a ship's officer shall be made at frequent intervals, and in any event not less than once in each month.

(c) Immediately after such an inspection by a ship's officer notations of such an inspection shall be made in record form which shall be in or kept with the cargo gear register if carried. In addition, the same notations of inspections together with the dates shall be entered in the Official Logbook for those vessels required to carry this record, or such information shall be kept with the log records maintained on vessels not required to carry the Official Logbook. (See § 71.47–75 for entries required to be kept.)

§ 71.47–75 Records regarding cargo gear.

(a) The cargo gear records described in this subpart shall be maintained on the vessel and shall be made available to Coast Guard officials upon request. These records shall be kept for the periods of time they are valid and, in addition, until the next Coast Guard inspection for certification of the vessel. The certificates of manufacturers and/or testing laboratories, companies, or organizations shall be maintained on the vessel so long as the gear described in such certificates is on board the vessel.

(b) The records of all the inspections of cargo gear made by the ship's officers in accordance with § 71.47–70 shall be maintained on the vessel for periods of time which agree with those periods as covered by the current Coast Guard certificate of inspection issued to the vessel. These records shall show the dates of inspections, identify articles inspected, the conditions observed, and the name of the officer performing the inspection.

(c) The records of all tests and examinations conducted by or under the supervision of surveyors of the organizations or associations approved by the Commandant shall be maintained on the vessel.

(d) The Coast Guard will not issue cargo gear certificates and/or registers. The Coast Guard's records of inspections, tests, and examinations of a particular vessel's cargo gear made by a marine inspector or conducted under the supervision of the Coast Guard will be maintained in the office of the Officer in Charge, Marine Inspection, having jurisdiction over the vessel at the time such work was performed. The original certificates or certified copies of certificates of manufacturers and/or testing laboratories, companies, or organizations for loose cargo gear, wire rope, or the annealing of gear shall be maintained on the vessel.

§ 71.47–80 Advance notice that cargo gear testing is desired.

(a) The owner, agent, or master of a vessel shall give an advance notice when it is desired that the tests and examinations of cargo gear be made by or under the supervision of the marine inspector. This advance notice shall be given to the Officer in Charge, Marine Inspection, in whose marine inspection zone the vessel is available for such inspection and examination.

(b) For the initial inspection and examination of cargo gear by the Coast Guard, the advance notice shall be to the cognizant Officer in Charge, Marine

Inspection, as early as possible and shall include sketches and/or drawings showing each unit of cargo gear, the identification of component parts and the safe working loads. Copies of original certificates of manufacturers and/or testing laboratories, companies, or organizations maintained on the vessel may be accepted by the cognizant Officer in Charge, Marine Inspection, when satisfied such certificates properly describe the qualities of the component parts of the gear in question.

§ 71.47–85 Responsibility for conducting required tests and examinations.

(a) The vessel's owners and/or operators shall furnish and pay the expenses required in conducting the tests and examinations prescribed by the regulations in this subpart, including the supplying of all instruments, other equipment, and personnel including personnel supervision for performance of all work required.

(b) The Coast Guard's participation in these required tests and examinations shall be confined to witnessing required tests and examinations with the view to determining whether or not the gear is satisfactory for the purpose intended. In the event it is determined that the gear is defective or unable to meet the standards set forth in this subpart, such gear, or portions thereof, shall be replaced to the satisfaction of the Officer in Charge, Marine Inspection, having jurisdiction over the vessel.

Subpart 71.50—Drydocking

§ 71.50–1 Definitions relating to hull examinations.

As used in this part—

(a) *Drydock examination* means hauling out a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and all through-hull fittings, sea chests, sea valves, sea strainers, and valves for the emergency bilge suction.

(b) *Internal structural examination* means an examination of the vessel while afloat or in drydock and consists of a complete examination of the vessel's main strength members, including the major internal framing, the hull plating, voids, and ballast tanks, but not including cargo or fuel oil tanks.

[CGD 84–024, 52 FR 39652, Oct. 23, 1987, as amended by CGD 84–024, 53 FR 32231, Aug. 24, 1988]

§ 71.50–3 Drydock and internal structural examination intervals.

(a) Each vessel making international voyages must undergo a drydock and internal structural examination once every 12 months.

(b) Except as provided in paragraphs (c) through (f) of this section, each vessel not making international voyages must undergo a drydock and internal structural examination as follows:

(1) Except as provided in paragraph (b)(2) of this section, vessels that operate in salt water must undergo two drydock and two internal structural examinations within any five year period. No more than three years may elapse between any two examinations.

(2) Vessels 20 years of age or older that operate in salt water and accommodate overnight passengers must undergo drydock and internal structural examinations at intervals not to exceed 18 months.

(3) Vessels that operate in fresh water at least six months in every 12 month period since the last drydock examination must undergo drydock and internal structural examinations at intervals not to exceed five years.

(c) Vessels with wooden hulls must undergo two drydock and two internal structural examinations within any five year period regardless of the type of water in which they operate. No more than three years may elapse between any two examinations.

(d) If, during an internal structural examination, damage or deterioration to the hull plating or structural members is discovered, the Officer in Charge, Marine Inspection, may require the vessel to be drydocked or otherwise taken out of service to further assess the extent of the damage and to effect permanent repairs.

(e) Each vessel which has not met the applicable examination schedules in paragraphs (a) through (d) of this section because it is on a voyage, must undergo the required examinations upon completion of the voyage.

(f) The Commandant (G–MOC) may authorize extensions to the examination intervals specified in paragraph (a) through (c) of this section.

[CGD 84–024, 52 FR 39652, Oct. 23, 1987, as amended by CGD 84–024, 53 FR 32231, Aug. 24, 1988; GCD 95–072, 60 FR 50463, Sept. 29, 1995; CGD 96-041, 61 FR 50729, Sept. 27, 1996]

§ 71.50–5 Notice and plans required.

(a) The master, owner, operator, or agent of the vessel shall notify the Officer in Charge, Marine Inspection, whenever the vessel is to be drydocked, regardless of the reason for drydocking.

(b) Each vessel, except barges, that holds a Load Line Certificate must have on board a plan showing the vessel's scantlings. This plan must be made available to the Coast Guard marine inspector whenever the vessel undergoes a drydock examination or internal structural examination or whenever repairs are made to the vessel's hull.

(c) Each barge that holds a Load Line Certificate must have a plan showing the barge's scantlings. The plan need not be maintained on board the barge but must be made available to the Coast Guard marine inspector whenever the barge undergoes a drydock examination or internal structural examination, or whenever repairs are made to the barge's hull.

[CGD 84–024, 52 FR 39652, Oct. 23, 1987]

Subpart 71.53—Integral Fuel Oil Tank Examinations

§ 71.53–1 When required.

(a) Each fuel oil tank with at least one side integral to the vessel's hull and located within the hull (''integral fuel oil tank'') is subject to inspection as provided in this section. Each integral fuel oil tank is subject to inspection as provided in this section. The owner or operator of the vessel shall have the tanks cleaned out and gas freed as necessary to permit internal examination of the tank or tanks designated by the marine inspector. The owner or operator shall arrange for an examination of the fuel tanks of each vessel during an internal structural examination at intervals not to exceed five years.

(b) Integral non-double-bottom fuel oil tanks need not be cleaned out and internally examined if the marine inspector is able to determine by external examination that the general condition of the tanks is satisfactory.

(c) Double-bottom fuel oil tanks on vessels less than 10 years of age need not be cleaned out and internally examined if the marine inspector is able to determine by external examination that the general condition of the tanks is satisfactory.

(d) All double-bottom fuel oil tanks on vessels 10 years of age or older but less than 15 years of age need not be cleaned out and internally examined if the marine inspector is able to determine by internal examination of at least one forward double-bottom fuel oil tank, and by external examination of all other double-bottom fuel oil tanks on the vessel, that the general condition of the tanks is satisfactory.

(e) All double-bottom fuel oil tanks on vessels 15 years of age or older need not be cleaned out and internally examined if the marine inspector is able to determine by internal examination of at least one forward, one amidships, and one aft double-bottom fuel oil tank, and by external examination of all other double-bottom fuel oil tanks on the vessel, the general condition of the tanks is satisfactory.

[CGD 84–024, 52 FR 39652, Oct. 23, 1987, as amended by CGD 84–024, 53 FR 32231, Aug. 24, 1988]

Subpart 71.55—Repairs and Alterations

§ 71.55–1 Permission required.

(a) No repairs or alterations affecting the safety of the vessel with regard to the hull, machinery, or equipment, shall be made without the knowledge of the Officer in Charge, Marine Inspection.

(b) Drawings of alterations shall be approved before work is started, unless deemed unnecessary by the Officer in Charge, Marine Inspection.

(c) Drawings will not be required for repairs in kind.

§ 71.55–5 Inspection required.

(a) An inspection, either general or partial depending upon the circumstances, shall be made whenever any important repairs or alterations are undertaken.

Subpart 71.60—Special Operating Requirements

§ 71.60–1 Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning or like fire-producing actions.

(a) The provisions of ''Standard for the Control of Gas Hazards on Vessels to be Repaired,'' NFPA No. 306, published by National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269, shall be used as a guide in conducting the inspections and issuance of certificates required by this section.

(b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions shall be made:

(1) Within or on the boundaries of cargo tanks which have been used to carry combustible liquid or chemicals in bulk; or,

(2) Within or on the boundaries of fuel tanks; or,

(3) To pipe lines, heating coils, pumps, fittings, or other appurtenances connected to such cargo or fuel tanks.

(c) Such inspections shall be made and evidenced as follows:

(1) In ports or places in the United States or its territories and possessions the inspection shall be made by a marine chemist certificated by the National Fire Protection Association; however, if the services of such certified marine chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor or their representative, shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicated that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified marine chemist or the authorized person before the work is started. Such qualifications shall include any requirements as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in such a port or place, and a marine chemist or such person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the inspection shall be made by the senior officer present and a proper entry shall be made in the vessel's logbook.

(d) It shall be the responsibility of the senior officer present to secure copies of certificates issued by the certified marine chemist or such person authorized by the Officer in Charge, Marine Inspection. It shall be the responsibility of the senior officer present, insofar as the persons under his control are concerned, to maintain a safe condition on the vessel by full observance of all qualifications and requirements listed by the marine chemist in the certificate.

[CGD 84–024, 52 FR 39652, Oct. 23, 1987, as amended by GCD 95–072, 60 FR 50463, Sept. 29, 1995]

Subpart 71.65—Plan Approval

§ 71.65–1 General.

(a) The list of required plans is general in character, but includes all plans in § 71.65–5 which normally show construction and safety features coming under the cognizance of the Coast Guard. In the case of a particular vessel, all of the plans enumerated may not be applicable, and it is intended that only those plans and specifications be submitted as will clearly show the vessel's arrangement, construction and required equipment.

(b) In the list of required plans in § 71.65–5 the items which must be approved by the American Bureau of

Shipping for vessels classed by that organization are indicated by an asterisk. When prints bearing record of such approval by the American Bureau of Shipping are forwarded to the Coast Guard they will in general be accepted as satisfactory except insofar as the law or the Coast Guard regulations contain requirements which are not covered by the American Bureau of Shipping.

§ 71.65–5 Plans and specifications required for new construction.

(a) *General.* (1) Specifications.

(2) General Arrangement Plan of decks, holds, inner bottoms, etc., and including inboard and outboard profile.

(b) *Hull structure.*[1]

(1) *Inner Bottom Plating and Framing.

(2) *Midship Section.

(3) *Shell Plating and Framing.

(4) *Stem, Stern Frame, and Rudder.

(5) *Structural Deck Plans for Strength Decks.

(6) *Pillars and Girders.

(7) *Watertight and Oiltight Bulkheads.

(8) *Foundations for Main Machinery and Boilers.

(9) *Arrangement of Ports, Doors, and Airports in Shell Plating.

(10) *Hatch Coamings and Covers in Weather and Watertight Decks.

(11) *Details of Hinged Subdivision Watertight Doors and Operating Gear.

(12) *Scuppers and Drains Penetrating Shell Plating.

(13) *Arrangement of the cargo gear including a stress diagram. The principal details of the gear and the safe working load for each component part shall be shown.

(c) *Subdivision and stability.* Plans and calculations required by subchapter S of this chapter.

(d) *Fire control.* (1) Fire control diagram showing location and type of all required fire-screen insulation, including main fire zone and subdivisions, stairway and elevator enclosures, control space enclosures, etc., and type of all doors in such subdivisions and enclosures.

(2) Comprehensive typical details of fire-screen insulation of both vertical and horizontal surfaces, including deck coverings where used, keyed by reference numbers to the ''fire control diagram''.

(3) Ventilation diagram including dampers and other fire control features.

(4) Alarm systems.

(5) Detecting systems.

(6) Extinguishing systems, including fire mains, carbon dioxide, foam, and sprinkling systems.

(7) Supervised Patrol Route.

(e) *Marine engineering.* (1) For plans required for marine engineering equipment and systems, see subchapter F (Marine Engineering) of this chapter.

(2) [Reserved]

(f) *Electrical engineering.* (1) For plans required for electrical engineering equipment and systems, see subchapter J (Electrical Engineering) of this chapter.

(2) [Reserved]

(g) *Lifesaving equipment.* (1) These plans are to show the location and arrangement of embarkation decks, all overboard discharges and projections in way of launching lifeboats, weights of lifeboats fully equipped and loaded, working loads of davits and winches, types and sizes of falls, the manufacturer's name and identification for all equipment, and all other relevant and necessary information.

(i) Arrangement of lifeboats.

(ii) Arrangement of davits.

(iii) Location and stowage of liferafts and buoyant apparatus.

(2) [Reserved]

(h) *Crew's accommodations.* (1) Arrangement plans showing accommodations, ventilation, escapes, hospital, and sanitary facilities for all crewmembers.

(2) [Reserved]

(i) *Navigation bridge visibility.* For vessels of 100 meters (328 feet) or more in length contracted for on or after September 7, 1990, a plan must be included which shows how visibility from the

[1] The Asterisk (*) indicates items that are approved by the American Bureau of Shipping for vessels classed by it. Items approved the American Bureau of Shipping are generally accepted as satisfactory unless the law or Coast Guard regulations contain requirements that are not covered by the American Bureau of Shipping.

navigation bridge will meet the standards contained in §72.04–1 of this subchapter.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 79–023, 48 FR 51007, Nov. 4, 1983; CGD 85–099, 55 FR 32247, Aug. 8, 1990; CGD 88–032, 56 FR 35824, Jul. 29, 1991]

§71.65–10 Plans required for alterations of existing vessels.

(a) In the event of alterations involving the safety of the vessel, the applicable plans shall be submitted for approval covering the proposed work, except as modified by §71.55–1(b). The general scope of the plans shall be as noted in §71.65–5.

§71.65–15 Procedure for submittal of plans.

(a) As the relative location of shipyards, design offices, and Coast Guard offices vary throughout the country, no specific routing will be required in the submittal of plans. In general, one of the following procedures would apply, but in a particular case, if a more expeditious procedure can be used, there will be no objection to its adoption:

(1) The plans may be submitted to the Officer in Charge, Marine Inspection, in the district in which the vessel is to be built. This procedure will be most expeditious in the case of those offices where personnel and facilities are available for examination and approval of the plans locally.

(2) The plans may be submitted directly to Commanding Officer, U.S. Coast Guard Marine Safety Center, 400 Seventh St., SW., Washington, DC 20590–0001. In this case, the plans will be returned directly to the submitter, with a copy of the action being forwarded to the interested Officer in Charge, Marine Inspection.

(3) In the case of classed vessels, upon specific request by the submitter, the American Bureau of Shipping will arrange to forward the necessary plans to the Coast Guard indicating its action thereon. In this case, the plans will be returned as noted in paragraph (a)(2) of this section.

(b) [Reserved]

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by GCD 95–072, 60 FR 50463, Sept. 29, 1995; CGD 95–072, 60 FR 54106, Oct. 19, 1995]

§71.65–20 Number of plans required.

(a) Three copies of each plan are normally required so that one can be returned to the submitter. If the submitter desires additional approved plans, a suitable number should be submitted to permit the desired distribution.

[CGFR 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGFR 69–116, 35 FR 6861, Apr. 30, 1970]

Subpart 71.75—Certificates Under the International Convention for Safety of Life at Sea, 1960

§71.75–1 Application.

(a) The provisions of this subpart shall apply to all vessels on an international voyage.

§71.75–5 Passenger Ship Safety Certificate.

(a) All vessels on an international voyage are required to have a ''Passenger Ship Safety Certificate.''

(b) All such vessels shall meet the requirements of this chapter for vessels on an international voyage.

[CGFR, 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 95–012, 60 FR 48051, Sept. 18, 1995]

§71.75–10 Exemption Certificate.

(a) A vessel may be exempted by the Commandant from complying with certain requirements of the Convention under his administration upon request made in writing to him and transmitted via the Officer in Charge, Marine Inspection.

(b) When an exemption is granted to a vessel by the Commandant under and in accordance with the Convention, an Exemption Certificate describing such exemption shall be issued through the appropriate Officer in Charge, Marine Inspection, in addition to the Passenger Ship Safety Certificate.

[CGFR, 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 95–012, 60 FR 48051, Sept. 18, 1995]

§71.75–15 Posting of Convention certificates.

(a) The certificates described in this subpart, or certified copies thereof, when issued to a vessel shall be posted

in a prominent and accessible place on the vessel.

(b) The certificate shall be carried in a manner similar to that described in § 71.01–5 for a certificate of inspection.

§ 71.75–20 Duration of certificates.

(a) The certificates shall be issued for a period of not more than 12 months.

(b) An Exemption Certificate shall not be valid for longer than the period of the Passenger Ship Safety Certificate to which it refers.

(c) The Passenger Ship Safety Certificate may be withdrawn, revoked, or suspended at any time when it is determined the vessel is no longer in compliance with applicable requirements. (See § 2.01–70 of this chapter for procedures governing appeals.)

[CGFR, 65–50, 30 FR 16895, Dec. 30, 1965, as amended by CGD 95–012, 60 FR 48051, Sept. 18, 1995]

PART 72—CONSTRUCTION AND ARRANGEMENT

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